



Level 3  
Communications

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May 29, 1998

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**VIA FEDERAL EXPRESS**

Magalie Roman Salas, Secretary  
Federal Communications Commission  
1919 M Street, N.W., Room 222  
Washington, D.C. 20554

Re: Ex Parte Presentation in CC Docket No. 97-211

Dear Ms. Salas:

Transmitted herewith on behalf of Level 3 Communications, Inc. and pursuant to Section 1.1206(a) of the Commission's Rules, 47 C.F.R. §1.1206(a) (1997), this is to provide an original and one copy of a notice of an *ex parte* presentation made Tuesday afternoon, May 26, 1998, in the above-referenced proceeding on behalf of Level 3 Communications, Inc. by James Q. Crowe, Matthew J. Johnson, Jack Waters, Robert Hagens, Jonathan Schiller, Robert Silver and the undersigned. These Level 3 Communications, Inc. participants met with Michelle Carey, Michael Kende, Eric Bash, Michael Pryor and Jennifer Fabian of the Common Carrier Bureau, and Stagg Newman of the Office of Plans and Policy ("FCC Participants") to discuss domestic Internet interconnection and peering issues raised in this proceeding and addressed in their comments. Copies of the attached written materials were provided to the FCC Participants at the meeting.

Should any further information be required with respect to this *ex parte* notice, please do not hesitate to contact me. I would also appreciate it if you would date-stamp the enclosed extra copy of this filing and return it with the messenger to acknowledge receipt by the Commission.

Very truly yours,

Terrence J. Ferguson

TJF:bb

Enclosures

cc: Michelle Carey, w/ out enclosure

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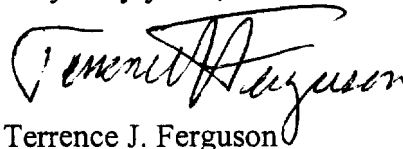
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## **Level 3 Communications**

### **Proposed Interconnection Principles**

The following principles are fundamental to an IP Interconnection Agreement, and all of the specific provisions of an IP Interconnection Agreement should be construed so as to be consistent with these principles.

- a. All Internet Networks of sufficient nationwide size and scope should be interconnected to each other on an efficient and reciprocal basis allowing two-way transmission of Internet traffic with commercially reasonable performance and service quality.
  - (i) An Internet Network is of sufficient nationwide size and scope if it has a point of presence in every city that contains a major Internet exchange point; each such point of presence interconnects directly with at least two other points of presence on the same Internet Network using dedicated facilities of sufficient bandwidth; and all of these points of presence are connected to each other directly or indirectly by dedicated facilities. An Internet Network that is under development meets this standard if the developer can demonstrate a reasonable likelihood that the network will meet these criteria upon completion.
  - (ii) As of the effective date of an IP Interconnection Agreement, the major Internet exchange points should be specifically set out in an Attachment; and a sufficient bandwidth between points of presence is 155 megabits per second. However, both of these criteria will need to be revised from time to time to reflect changes in Internet capacity demands.
- b. Interconnection among Internet Networks should be reciprocal and non-discriminatory, and costs should be borne by both parties to an IP Interconnection Agreement on an equitable and non-discriminatory basis. Traffic received from or sent to an interconnecting network should be equal in priority and quality as comparable traffic routed within a party's own network. "Equal in quality" is with reference to functionally equivalent installation, provisioning intervals and maintenance, testing and repair performance. To this end, each party should provide the other with interconnection to its Internet Network on terms and conditions that are no less favorable than the terms provided by the party to itself or to any subsidiary, affiliate, or any other Internet Network to which the party provides comparable interconnection. Each party should operate the interconnection facilities between networks according to the same technical and quality standards as it uses in operating its own backbone infrastructure. If either party offers more favorable interconnection terms to itself or to any subsidiary, affiliate, or other Internet Network, those more favorable terms should be extended to the other party under an IP Interconnection Agreement.

# **The MCI-WorldCom Merger**

**Internet Backbone Service Monopolization  
Issues and Remedy Analysis**

**Presentation by Level 3 Communications, Inc.**

**Confidential**

**May 26, 1998**

## **Presentation Summary**

**The proper remedy for problems created by the MCI-WorldCom merger is a consent decree requiring non-discriminatory interconnection (“IP Equal Access”) with competitors based on comparably efficient peering (“CEP”).**

- MCI-WorldCom will have an incentive to interconnect with smaller rivals on terms that are technically or economically discriminatory.
- MCI-WorldCom will have an incentive to restrain innovative Internet services which threaten the merged entity’s existing telephone services.
- Divestiture alone will not eliminate MCI-WorldCom’s incentive to discriminate.
  - MCI-WorldCom will still have an incentive to discriminate against Level 3 and other rivals with smaller market share.
  - MCI-WorldCom will still have an incentive to favor its legacy telephone business over rapid development of Internet services.
  - In fact, a remedy based on divestiture will depend on a policeable requirement for non-discriminatory interconnection between the divested entity and the merged company for a protracted period of time .

# **Presentation Summary**

(Continued)

- A consent decree is the proper remedy.
  - MCI-WorldCom must interconnect with competitors on fair terms.
  - A consent decree based on CEP is policeable by the interconnecting parties.
  - A consent decree by the dominant provider of backbone services will set a valuable precedent for all incumbent providers.

## **Background of Level 3 Participants**

- |                   |  |
|-------------------|--|
| James Crowe       | <ul style="list-style-type: none"><li>- Founder and former, Chairman and CEO, MFS Communications<ul style="list-style-type: none"><li>• MFS purchased UUNET in 1996</li></ul></li><li>- Former Chairman, WorldCom, Inc.<ul style="list-style-type: none"><li>• WorldCom purchased MFS in December 1996</li></ul></li><li>- Founder, President and CEO, Level 3</li></ul> |
| Terrence Ferguson | <ul style="list-style-type: none"><li>- Former General Counsel, MFS</li><li>- General Counsel, Level 3</li></ul>   |
| Matthew Johnson   | <ul style="list-style-type: none"><li>- Associate General Counsel, Level 3</li></ul>   |
| Robert Hagens     | <ul style="list-style-type: none"><li>- Former Director of Internet Engineering, MCI</li><li>- Senior Director of Service Implementation, Level 3</li></ul>  |
| Jack Waters       | <ul style="list-style-type: none"><li>- Former Architect of Internet Services, MCI</li><li>- Vice President, Engineering, Level 3</li></ul>  |

**Level 3 intends to provide a full range of communications services over an end-to-end network designed and built specifically for Internet Protocol based services.**

- Level 3 will provide a comprehensive range of communications services.
  - Private line.
  - Voice and fax telephony.
  - Internet access.
  - Co-location and web hosting.
  - Virtual private IP networks.
- Level 3 will address all market segments.
  - Direct sales to larger businesses.
  - Indirect sales to medium/small business and residential customers through wholesalers and resellers of Level 3 services.

## **The Level 3 international network is currently under development.**

- 50 U.S. city fiber ring networks.
- 15,000 mile U.S. intercity network.
- 13 European city networks.
- 3,000 mile Pan-European network.
- 10 Asian city networks.
- Trans Atlantic /Pacific submarine fiber network.
- Advanced fiber and SONET self-healing rings.
- Phased completion of the Level 3 network is expected in 30 to 48 months.
- An agreement to lease a national network is in place and supports initial service deployment in July/August 1998.
  - 8,300 mile SONET network.
  - Replaced by Level 3 network over time.

**Level 3 has the financial capability to complete its \$8 to \$10 billion business plan.**

- \$4.0 billion in cash.
- \$1.0 billion in stock holdings.
- \$7.5 billion in market capitalization.
- Conservative financial structure helps assure continued access to capital markets.

## **MCI and WorldCom refuse to enter into interconnection agreements with Level 3.**

- Formal requests by Level 3 to WorldCom and MCI in February 1998 to enter into peering agreements for Internet access were rejected in April.
  - MCI citing its peering standards, points to Level 3's insufficient backbone and customers. When told that Level 3 had a nationwide network as a result of a capacity agreement with Frontier Corporation, MCI told Level 3 to reapply in 90 days.
  - WorldCom refused to peer, based on its peering standards, particularly insufficient network and customers.
  - Both companies were told of Level 3's management expertise, financial strength, experience at MFS, and its accelerated timetable to turn up service to customers in the third quarter of 1998.
  - No peering discussions are ongoing between Level 3 and MCI-WorldCom.
- Level 3 has no peering agreements with MCI, WorldCom, GTE, Sprint and AT&T.
- In the February to May 26th timeframe, Level 3 has entered into peering agreements with seven other Internet access backbone providers - Above.Net, ConXion, Epoch, Erol's, Exodus, PrioriNet-Works and Winstar Goodnet.

**The continued development of the Internet depends on innovation and competition, especially from new entrants.**

- The Internet is still in its infancy.
  - The currently “dominant” backbone providers were effectively startups a few years ago.
  - Internet revenue is still a small fraction of overall, comparable communications revenue - see Exhibit A.
- Because it is less expensive today, and improving faster than traditional telephone technology, IP based networks are likely to dominate communications over time - see Exhibits B and C.

## Internet Services are Less Than 10% of the Communications Market

<u>Addressable Internet Market</u>		<u>Global Communications Market</u>	
Data Services	28,470	Switched Telephony	440,166
Internet Access	11,129	Fax	59,924
IP Telephony	700	Private Line	33,732
IP VPN	272	Available Today	40,571
<b>TOTAL</b>	<b>40,571</b>	<b>TOTAL</b>	<b>574,393</b>

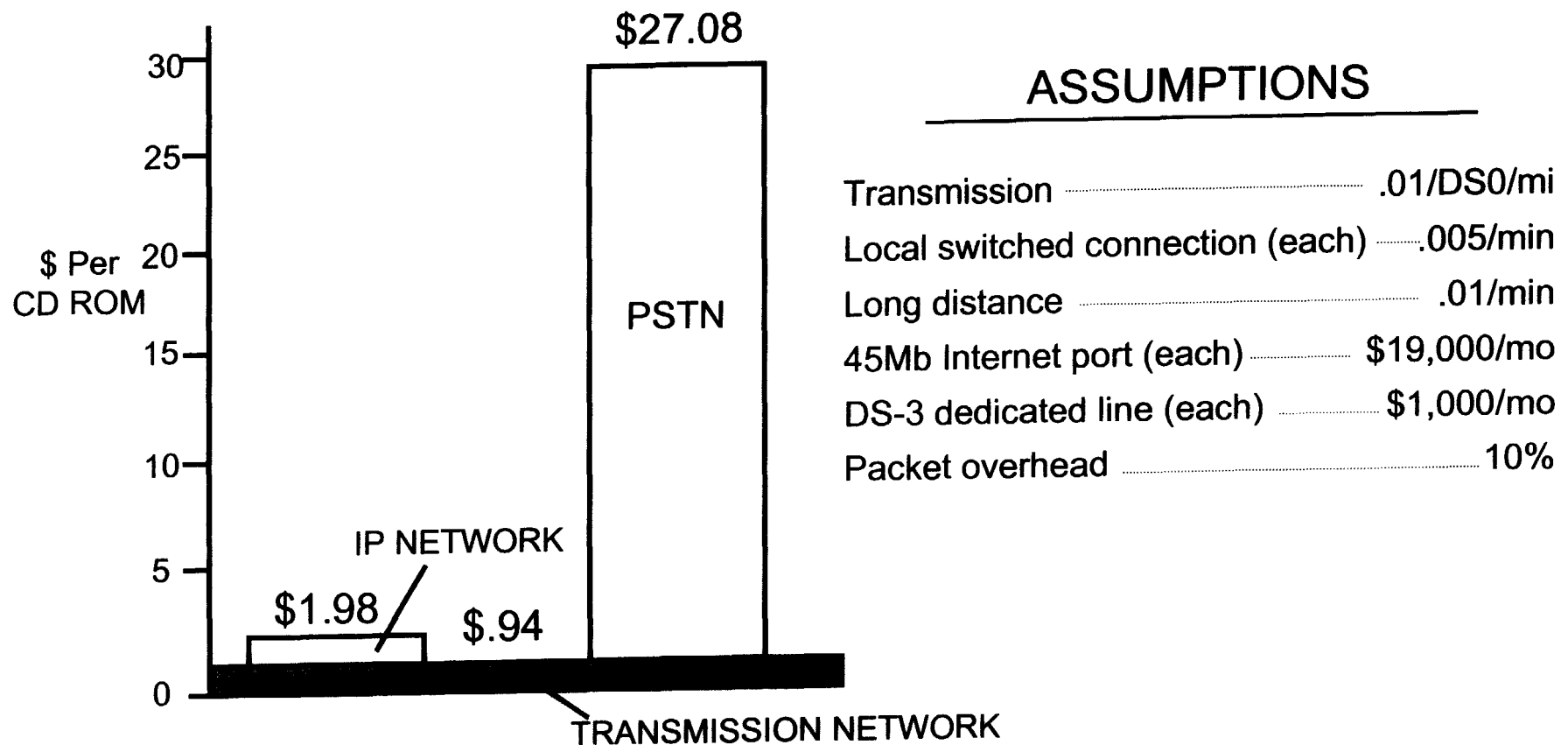
$\frac{\text{Available Internet Market}}{\text{Global Communications Market}} = 7\%$
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Source: International Data Corp, 1998  
In \$ millions

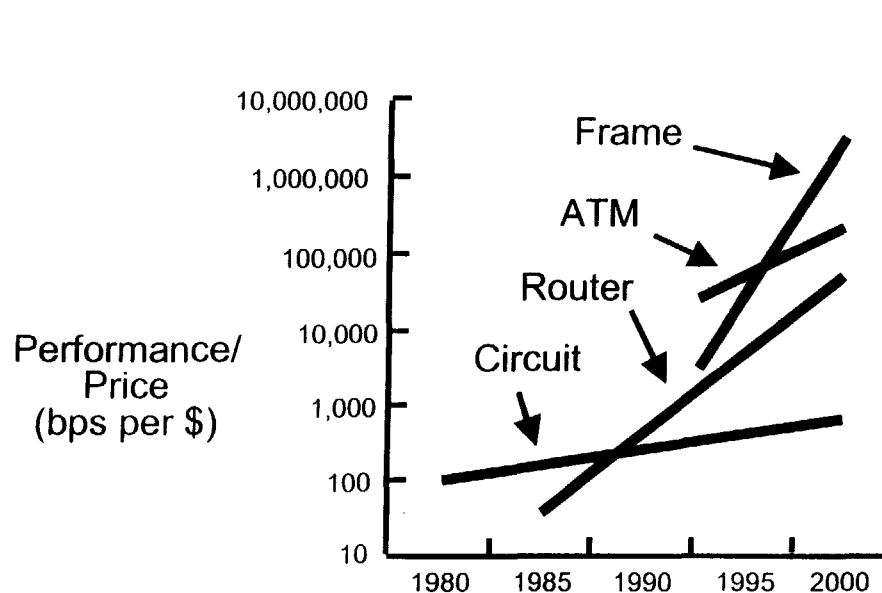
# IP Technology is Less Expensive

## Cost Per CD ROM (650 MB)

New York to Los Angeles



# IP Technology Is Improving More Rapidly Than Traditional Telephone Switching



Platform	Time to Double Performance/Price (months)
Frame	10
Router	20
ATM	40
Circuit	80
Transmission	13*

Source: "Why Circuit Switching is Doomed,"  
Peter J. Sevcik, Business Communications Review, Sept., 1997

\* By Level 3 - 1991 to 1998

**The continued development of the Internet depends on innovation and competition, especially from new entrants.**

(Continued)

- New entrants, new ideas and innovation are key to the future development of the Internet.
- New ideas are not a function of size and market share.
- Incumbents can inhibit innovation by providing interconnection that is technically or economically inferior to comparable interconnection links provided to others or to themselves internally.

**The importance of non-discriminatory interconnection between Level 3 and other new entrants and MCI-WorldCom is particularly critical given the economic incentives of the largest incumbent Internet backbone provider to slow the pace of Internet development.**

- MCI-WorldCom (as well as GTE, AT&T, Sprint and others) derives the vast majority of both revenues and profits from traditional voice and fax services.
- Services such as voice or fax over the Internet promise to bring substantial economic and service benefits to customers.
- Rapid development and deployment of these services will result in a significant threat to the largest Internet backbone providers core telephone revenues and profits.

## **GTE contends that the merged MCI-WorldCom will have an incentive to discriminate with respect to peering.**

- Peering is interconnection between parties who do not compensate each other for traffic flows between their networks. Peering implies that revenues received by each party are proportional to the traffic flows between the parties.
- GTE maintains that the combination of MCI and WorldCom will create a competitor that will enjoy a “disparate size advantage relative to the next largest backbone” (p10, Complaint for Declaratory and Injunctive Relief, GTE Corporation, 05/07/98).
- GTE contends that the combined entity will “have such disparate market power relative to other backbone operators... MCI-WorldCom will have the incentive and the ability to degrade the quality of rivals service and raise their costs...” (GTE Complaint, p12).
- GTE has stated that “There is no effective way to police or regulate the conduct that will results from the MCI-WorldCom merger” (GTE Complaint, p16).
- GTE therefore, proposes that MCI-WorldCom’s market share of Internet backbone services be reduced by divestiture of either MCI or WorldCom’s Internet backbone subsidiaries.

**GTE's analysis of the monopolization problems created by the MCI-WorldCom merger is flawed, therefore the proposed remedy is flawed.**

- GTE assumes that the set of Internet backbone providers is fixed as of today and thus the incentive to discriminate with respect to interconnection depends on traffic balances between the current limited number of backbone providers.
- In fact, the incentive to provide discriminatory interconnection exists whenever one provider has a relative market share advantage over another.
- Thus GTE has as much incentive to discriminate against a smaller rival as MCI-WorldCom does against GTE.
- Generally, any provider of network services has an incentive to refuse to interconnect with or to provide inferior interconnection to any rival who has a substantially smaller customer base relative to the larger entity.
- GTE's proposed remedy - reduction in the MCI-WorldCom market share relative to GTE - does not address the core incentive to engage in discriminatory interconnection practices with respect to smaller rivals.

**GTE's analysis of monopolization problems created by the MCI-WorldCom merger is flawed, therefore the proposed remedy is flawed.**

(Continued)

- This incentive to discriminate is substantially increased since MCI-WorldCom (as well as other incumbents who are predominately telephone companies) has the capability and incentive to favor its legacy telephone business over innovative Internet services provided by new entrants.
- GTE's proposed remedy will require constant monitoring of market share to assure no entity gains sufficient share to develop an incentive to discriminate with respect to GTE itself, and provides no protection for national backbone providers with smaller market shares.
- GTE's proposed remedy is inconsistent with its contention that interconnection quality is inherently unpoliceable since the divested entity's viability will depend on non-discriminatory interconnection with its former parent for a protracted period of time.

**The proper remedy for the potentially discriminatory behavior by MCI-WorldCom towards Level 3 and other competitors is to require non-discriminatory interconnection (“IP Equal Access”) with all competitors on terms that are comparable to those provided by MCI-WorldCom to itself internally or to third parties on comparable interconnection links (comparably efficient peering or “CEP”).**

- IP Equal Access based on CEP directly addresses the core problem caused by the MCI-WorldCom merger - the incentive to refuse to interconnect with or to provide inferior interconnection to rivals with fewer customers who may offer services which directly threaten MCI-WorldCom’s legacy telephone business.
- Interconnection based on CEP provides a practical, evolving definition of IP Equal Access which accommodates future, unpredictable technical and economic developments.
- A merger of MCI and WorldCom provides a unique opportunity to set a precedent by requiring the merged entity to enter into a consent decree requiring IP Equal Access based on CEP - a precedent that will help assure the continuing rapid development of the Internet.
- IP Equal Access based on CEP does not penalize MCI-WorldCom now or in the future for market share gain obtained by innovation or other legitimate competitive advantages.

## **IP Equal Access based on CEP is practical and policeable.**

- An IP Equal Access consent decree can be monitored by industry competitors and enforcement actions taken if necessary.
- Existing and well established Internet measurement tools (commonly used to evaluate the internal performance of a backbone) can be used to monitor interconnect performance.
- Periodic forecasts which document the observed growth of an interconnect can be used to plan for future capacity requirements.
- Defined delivery schedules for interconnect capacity, can be used to ensure the development and implementation of expanded interconnection capacity.
- The nature of monitoring and enforcement actions are not conceptually different than those required to make GTE's proposed divestiture of Internet MCI or UUNet workable.

**IP Equal Access based on CEP is conceptually similar to remedies that have proven effective in analogous situations for more than 80 years.**

<u>Time Period</u>	<u>Anticompetitive Activity</u>	<u>Remedy</u>
Mid 1890s to 1914	AT&T forced independent telephone companies to accept purchase offers by refusing to interconnect with competitors	Justice Department and AT&T agreed to Kingsbury Commitment requiring AT&T to interconnect on fair terms with independent telcos
1956	AT&T refused to allow competitive equipment maker Hush-a-Phone to connect to telephone devices	Court ordered AT&T to allow non-detrimental equipment to connect to subscriber telephones

<b><u>Time Period</u></b>	<b><u>Anticompetitive Activity</u></b>	<b><u>Remedy</u></b>
1968	AT&T refused to allow competitive equipment maker Carterphone to connect devices to AT&T network	FCC orders AT&T to develop fair policies allowing users to connect non-harmful equipment to AT&T network
1971	AT&T refused to interconnect with networks of Specialized Common Carriers (SCC)	FCC requires AT&T to interconnect with SCCs on terms which do not "discriminate in favor of an affiliated carrier or show favoritism among competitors" (FCC's SCC Order, 1971)
1973	AT&T refused to interconnect with MCI's intercity network	Court ordered AT&T to interconnect with MCI. AT&T successfully appealed and disconnected MCI's customers on 24 hours notice

<u>Time Period</u>	<u>Anticompetitive Activity</u>	<u>Remedy</u>
1974	AT&T used tariffs filed in state jurisdictions to justify discriminatory interconnection with SCCs	FCC orders AT&T to interconnect with SCCs on terms similar to AT&Ts comparable internal connections
1977	AT&T refused to allow users to connect terminal equipment to AT&T network	FCC orders AT&T to allow interconnection
1978	AT&T refuses to interconnect with MCI's and Southern Pacific's networks	Court finds "AT&T denial of an obligation to interconnect [is] a violation of the antitrust laws and contrary to the public interest" (MCI vs FCC, D.C. Cir 1997)
1978	AT&T refuses to interconnect with MCI for provision of Execunet services	Court finds AT&T must interconnect with MCI